AMENDMENTS TO THE CLAIMS

1-123. (Canceled)

124. (New) An implantable sensor for use in measuring a concentration of an analyte in a bodily fluid, the sensor comprising:

a sensor body comprising a sensing region adapted for transport of an analyte between the sensor and the bodily fluid, and a porous biointerface material that covers at least a portion of the sensing region and that supports tissue ingrowth, wherein the sensing region is located on a curved portion of the body such that when a foreign body capsule forms around the sensor, a contractile force is exerted by the foreign body capsule toward the sensing region.

125. (New) The sensor of claim 124, wherein the sensor is a subcutaneous sensor.

126. (New) The sensor of claim 124, wherein the sensor is suitable for implantation in a soft tissue of a body.

127. (New) The sensor of claim 124, wherein the sensor comprises a plurality of sensing regions.

128. (New) The sensor of claim 127, wherein the plurality of sensing regions is located on curved portions of the body.

129. (New) The sensor of claim 124, wherein the body comprises a first major surface and a second major surface, and wherein the sensing region is located on said first major surface, and wherein said second major surface comprises a curvature.

130. (New) The sensor of claim 124, wherein the body comprises a first surface and a second surface, and wherein the sensing region is situated approximately at an apex of said first surface.

131. (New) The sensor of claim 124, wherein the body comprises a first surface and a second surface, and wherein said first surface, when viewed from a direction perpendicular to a center of said first surface, has a substantially rectangular profile with rounded corners.

132. (New) The sensor of claim 124, wherein the body comprises a first surface on which the sensing region is located and a second surface, and wherein said first surface comprises anchoring material thereon for supporting tissue ingrowth.

133. (New) The sensor of claim 132, wherein said second surface is located opposite said first surface, and wherein said second surface comprises anchoring material thereon for supporting tissue ingrowth.

134. (New) The sensor of claim 124, wherein said second surface is located opposite said first surface, and wherein said second surface is substantially smooth and comprises a biocompatible material that is non-adhesive to tissues.

135. (New) The sensor of claim 134, said second surface is curved.

136. (New) The sensor of claim 124, further comprising a mechanical anchoring mechanism formed on the body.

137. (New) The sensor of claim 124, wherein said curved portion comprises a plurality of radii of curvature.

138. (New) The sensor of claim 124, wherein said curved portion comprises a radius of curvature between about 0.5 mm and about 10 cm.

139. (New) The sensor of claim 124, wherein said curved portion comprises a radius of curvature between about 1 cm and about 5 cm.

140. (New) The sensor of claim 124, wherein said curved portion comprises a radius of curvature between about 2 cm and about 3 cm.

141. (New) The sensor of claim 124, wherein said curved portion comprises a radius of curvature between about 2.5 cm and about 2.8 cm.

142. (New) The sensor of claim 124, wherein the sensor comprises a major surface and wherein said curved portion is located on at least a portion of the major surface.

143. (New) The sensor of claim 124, wherein the body further includes a flat portion adjacent said curved portion.

144. (New) The sensor of claim 143, wherein an interface between the flat portion and the curved portion comprises a gradual transition.

145. (New) The sensor of claim 124, wherein the body comprises a first major surface on which said sensing region is located and a second major surface, and wherein the first and second major surfaces together account for at least about 40% of the surface area of the device.

146. (New) The sensor of claim 145, wherein the first and second major surfaces together account for at least about 50% of the surface area of the device.

147. (New) The sensor of claim 124, wherein the body comprises a first major surface on which said sensing region is located and a second major surface, wherein the first major surface has edges between which a width of the first major surface can be measured, and wherein the sensing region is spaced away from the edges by a distance that is at least about 10% of the width of the first major surface.

148. (New) The sensor of 147, wherein the sensing region is spaced away from the edges by a distance that is at least about 15% of the width of the first major surface.

149. (New) The sensor of claim 147, wherein the sensing region is spaced away from the edges by a distance that is at least about 20% of the width of the first major surface.

150. (New) The sensor of claim 147, wherein the sensing region is spaced away from the edges by a distance that is at least about 25% of the width of the first major surface.

151. (New) The sensor of claim 147, wherein the sensing region is spaced away from the edges by a distance that is at least about 30% of the width of the first major surface.

152. (New) The sensor of claim 147, wherein the spacing of the sensing region from the edges is true for at least two width measurements, which measurements are taken generally transverse to each other.

153. (New) The sensor of claim 142, wherein the body comprises a first major surface on which said sensing region is located and a second major surface, wherein the first major surface is at least slightly convex.

154. (New) The sensor of claim 153, wherein a reference plane may be defined that touches the first major surface at a point spaced in from edges of the first major surface, and is generally parallel to the first major surface, and is spaced away from opposite edges of the first major surface due to convexity of the first major surface, and wherein a location of an edge is the point at which a congruent line or a normal line is angled 45 degrees with respect to the reference plane.

155. (New) The sensor of claim 154, wherein the reference plane is spaced from the edges a distance that is at least about 3% from the edges, and not more than 50% of the width.

156. (New) The sensor of claim 154, wherein the reference plane is spaced from the edges a distance that is at least about 3% from the edges, and not more than 25% of the width.

157. (New) The sensor of claim 154, wherein the reference plane is spaced from the edges a distance that is at least about 3% from the edges, and not more than 15% of the width.

158. (New) The sensor of claim 124, wherein the body comprises a first major surface on which said sensing region is located, and wherein edges of the first major surface are rounded and transition smoothly away from the first major surface.

159. (New) The sensor of claim 124, wherein the body defines a surface area, and wherein between 10 % and 100% of the surface area is convexly curved.

160. (New) The sensor of claim 124, wherein the body defines a surface area, and wherein a substantial portion of the surface area is convexly curved.

161. (New) The sensor of claim 124, wherein the body defines a surface area, and where at least about 90 % of the surface area is convexly curved.

162. (New) The sensor of claim 124, wherein the body comprises plastic.

163. (New) The sensor of claim 162, wherein the plastic is selected from the group consisting of thermoplastic and thermoset.

164. (New) The sensor of claim 162, wherein the thermoset is epoxy.

165. (New) The sensor of claim 124, wherein the biointerface material comprises interconnected cavities dimensioned and arranged to create contractile forces that counteract with the generally uniform downward fibrous tissue contracture caused by the foreign body capsule *in vivo* and thereby interfere with formation of occlusive cells.

166. (New) The sensor of claim 165, wherein the sensor is a glucose sensor.

167. (New) An implantable sensor for use in measuring a concentration of an analyte in a bodily fluid, the sensor comprising:

a body comprising a sensing region on a major surface of said body, wherein said major surface comprises a continuous curvature substantially across the entire surface such that when a foreign body capsule forms around the sensor, a contractile force is exerted by the foreign body capsule toward the sensing region.

168. (New) A wholly implantable sensor adapted to measure a concentration of an analyte in a bodily fluid, comprising:

a wholly implantable body comprising a sensing region adapted for transport of analytes between the sensor and the bodily fluid and a porous biointerface material covering at least a portion of the sensing region that supports tissue ingrowth, wherein the sensing region is located on a curved portion of a first surface of said body and wherein said first surface comprises anchoring material thereon for supporting tissue ingrowth.

169. (New) An implantable sensor adapted to measure a concentration of an analyte in a bodily fluid, comprising:

a body having a first major surface and, opposite thereto, a second major surface, wherein the first major surface is generally planar, slightly convex, and has rounded edges, with an electrochemical sensing region located on the first major surface that is spaced away from the rounded edges, wherein the first major surface is sufficiently convex that when a foreign body capsule forms around the sensor, contractile forces are exerted thereby generally uniformly towards the sensing region.

170. (New) An implantable sensor for use in measuring a concentration of an analyte in a bodily fluid, the sensor comprising:

a body, the body comprising a sensing region adapted for transport of analytes between the sensor and the bodily fluid, wherein the sensing region is located on a major surface of the body, wherein said major surface comprises a continuous curvature substantially across the entire surface of the body, and wherein a thermoset material substantially encapsulates the body outside the sensing region.

171. (New) An implantable sensor for use in measuring a concentration of an analyte in a bodily fluid, the sensor comprising:

sensing means for measuring a concentration of analyte in a bodily fluid;

housing means for supporting said sensing means; and

a porous biointerface material covering at least a portion of the sensing means, wherein the porous biointerface material supports tissue ingrowth, wherein said sensing means is located on a curved portion of housing means such that when a foreign body capsule forms around the housing means, a contractile force is exerted by the foreign body capsule toward the sensing means.

172. (New) An implantable drug delivery device that allows transport of analytes between the device and a bodily fluid, the device comprising:

a body comprising an analyte transport region adapted for transport of analytes between the device and the bodily fluid and a porous biointerface material covering at least a portion of the analyte transport region that supports tissue ingrowth, wherein the transport region is located on a curved portion of the body such that when a foreign body

capsule forms around the device, a contractile force is exerted by the foreign body capsule toward the analyte transport region.

173. (New) An implantable cell transplantation device that allows transport of analytes between the device and a bodily fluid, the device comprising:

a body comprising an analyte transport region adapted for transport of analytes between the device and the bodily fluid and a porous biointerface material covering at least a portion of the analyte transport region that supports tissue ingrowth, wherein the transport region is located on a curved portion of the body such that when a foreign body capsule forms around the device, a contractile force is exerted by the foreign body capsule toward the analyte transport region.